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(54) Title: THERMAL BARRIER COATING WITH THERMOLUMINESCENT INDICATOR MATERIAL EMBEDDED THEREIN

(57) Abstract

A coating material (20) for coating a machine component (10), especially a gas turbine or a part thereof, comprises a mixture of at least a refractory material and an indicator material having an optical emission (e.g. fluorescence) spectrum which varies in response to a physical parameter of the coated component. In a preferred embodiment, the coating consists of yttrium aluminium garnet (YAG) or yttrium stabilised zirconium. The dopant is preferably a rare earth metal, e.g. Eu, Tb, Dy.

